414 Longfellow Hall 13 Appian Way Cambridge, MA 02138 (617) 495-3839 (voice) (617) 495-9268 (fax) CHRIS DEDE Graduate School of Education Harvard University <u>Chris\_Dede@Harvard.edu</u> <u>https://chrisdede.com</u> https://www.gse.harvard.edu/faculty/christopher-dede

# Senior Research Fellow, Harvard Graduate School of Education

Chris Dede is a Senior Research Fellow at the Harvard Graduate School of Education and was for 22 years its Timothy E. Wirth Professor in Learning Technologies. His fields of scholarship include emerging technologies, policy, and leadership. His funded research includes grants from the National Science Foundation (NSF), the U.S. Department of Education's Institute of Education Sciences, and the Gates Foundation. From 2001-2004, he was Chair of the HGSE department of Teaching and Learning. In 2007, he was honored by Harvard University as an outstanding teacher, and in 2011 he was named a Fellow of the American Education and Human Resources. In 2021, he received a "Community Builder" award from the National Coalition for Technology in Education and Training (NCTET), and in 2023 he was named a Fellow of the Online Learning Consortium.

Chris has served as a member of the National Academy of Sciences Committee on Foundations of Educational and Psychological Assessment, a member of the U.S. Department of Education's Expert Panel on Technology, a Steering Committee member for the Second International Technology in Education Study, and a member of the 2010 National Educational Technology Plan Technical Working Group. In 2013 he co-convened a NSF workshop on new technology-based models of postsecondary learning, and in 2015 he led two NSF workshops on data-intensive research in the sciences, engineering, and education. In 2020 he co-founded the Silver Lining for Learning initiative (https://silverliningforlearning.org). He is currently an Advisor to the Alliance for the Future of Digital Learning, sponsored by the Mohammed bin Rashid Global Initiative (MBRGI). Also, Chris is a Co-Principal Investigator and Associate Director for Research of the NSF-funded National Artificial Intelligence Institute in Adult Learning and Online Education. He is the only person to twice receive the Association for Educational Communications and Technology (AECT) Distinguished Development Award.

Chris has co-edited seven books in the last sixteen years: Scaling Up Success: Lessons Learned from Technology-based Educational Improvement; Online Professional Development for Teachers: Emerging Models and Methods; Digital Teaching Platforms: Customizing Classroom Learning for Each Student; Teacher Learning in the Digital Age: Online Professional Development in STEM Education; Virtual, Augmented and Mixed Reality in Education; Education at Scale: Engineering Online Learning and Teaching; Learning engineering for online education: Theoretical contexts and design-based examples; and The 60-Year Curriculum: New Models for Lifelong Learning in the Digital Economy.

# **Professional Experience**

2022-present: Senior Research Fellow, Harvard Graduate School of Education

2000-2022:	Timothy E. Wirth Professor in Learning Technologies, Harvard University		
1991-2000:	Full	Professor, George Mason University	
1996-1997:	Senior Program Director, National Science Foundation (on leave from GMU)		
1984-1990:	Visiting Scientist, Johnson Space Center, NASA		
1984:	Visiting Scientist, Computer Science Lab, MIT (Sabbatical)		
1979-80:	Policy Fellow, Office of the Director, National Institute of Education (via the Institute for Educational Leadership)		
1974-81:	Full/Associate/Assistant Professor, University of Houston-Clear Lake		
1972-74:	Assistant Professor, University of Massachusetts		
Education	Ed.D.	University of Massachusetts, 1972 science education	
	B.S.	California Institute of Technology, 1969 double major: chemistry and English	

## **Representative Government Activities**

#### National Academy of Sciences

invited Paper and Talk, Workshop on Games and Simulations in Science Education

- co-chair, Committee on Enhancing Professional Development for Teachers: Potential Uses of Information Technology; Workshop on Online Teacher Professional Development
- member, Committee on Psychological and Educational Foundations of Assessment
- presenter, Workshop on the Roles of Information Technology in Improving Teaching and Learning in Undergraduate Science, Mathematics, Engineering, and Technology Education
- Keynote, Board on Science Education Workshop on Information and Communications Technology Fluency
- Organizing Committee and Panel Moderator, National Academy of Education Workshop on Big Data in Education

#### National Science Foundation

Visiting Expert providing strategic counsel and support

Invited presentation on postsecondary learning workshop, NSF

Organized and moderated two NSF-funded workshops for the Computing Research Association: *Towards Big Steps Fostered by Big Data Science*, and *Advancing Dataintensive Research in Education* 

Co-Convener of NSF workshop on New, Technology-based Models of Higher Education

served for one year (on sabbatical) as Senior Program Director in the National Science Foundation's Directorate of Education and Human Resources. Responsible for initiating and directing \$25M funding program, "Research on Education, Policy, and Practice"

member, Committee of Vistors, CAREER program

participant, NSF Cyberlearning Workshop

speaker, NSF/EHR/REC Workshop on strategic planning for communication activities

participant, Computer Research Association Cyberlearning Workshop on Modeling, Simulation, and Gaming Technologies Applied to Learning

- invited poster session, National Workshop on K-12 STEM Education (sponsored by NSF/NSA)
- panelist, NSF Centers for Learning & Teaching Reverse Site Visit 05
- Chair, Committee of Visitors, ISE program
- Invited talks to NSF program officers on scalability of educational innovations and on the relationship of 21<sup>st</sup> century skills initiatives to STEM

Invited plenary talks to NSF ITEST Principal Investigators Meeting 09

Board of Advisors, CADRE DRK-12 Technical Support Project

## U.S. Congress

testified to the Science Committee, U.S. House of Representatives, May, 2001

testified to the Congressional Web-based Education Commission, June, 2000

## U.S. Department of Education

Technical Working Group, Evidence of Effectiveness Initiative Briefing on Educational Technology, Secretary Duncan's Leadership Team Technical Working Group, National Education Technology Plan 2009 Invited Panelist, US. Dept of Education Policy Briefing on Technology Organizer, Workshop on Reinventing High Schools for the 21<sup>st</sup> Century Member, Technology Expert Panel Advisory Board, Designing a National Study of the Effectiveness of Educational Technology Advisory Board, Ready to Learn Television program

# U.S. Department of Defense

Expert Panelist on the comprehensive technology plan for the Department of Defense Education Activities

Invited Keynote, Educational Simulations and Serious Games Symposium, Defense Intelligence Analysis Center

## U.S. Agency for International Development

Expert Panelist on designing and studying applications of educational technology for developing countries

Massachusetts State Government

Member, Task Force on 21st Century Skills

Testimony, Special Committee on Educational Technology

## **Representative Corporate Activities**

ACTNext: Advisory Board

Mursion: Advisory Board

Macmillan: Advisory Board

Pearson: Efficacy Advisor

McGraw Hill Education: Advisor

Texas Instruments: Presenter at Roadshow events

Cognotion: Advisory Board

<u>Kirkland & Ellis:</u> Expert witness in intellectual property case; our side won, other side's patent was invalidated

Wireless Generation: Consulting

The Capital Group: Invited briefing

Intel: External Research Advisory Committee

Qualcomm: Co-Chair Wireless EdTech Conference 2010, 2011, 2012, 2013; consultant

ETS: Standing Committee, NAEP Technology and Engineering Literacy Assessment

Lenovo: Advisory Board, Education Research Initiative

Sony: Invited presentation to Executive Advisory Board

Pearson: workshop on instructional design

Laureate: presenter, consultant

aal: Keynote, Users Conference

Mitre: Presenter, Interagency Distance Learning Advisory Council

Microsoft: Advisor for the U.S. Partners in Learning Mid-Tier Grant Program

Convener, Meeting on Student Privacy Issues related to Cloud Databases

Consultant

Dell: Speaker at Superintendents Forum

<u>IBM</u>: Consultant on New Models of Management Education; Invited Talk at IBM Research Center: Education Group Cap, Gemini, Ernst, & Young: Business Learning Forum "Future of Learning" RAVE

## Representative Activities for Professional Associations, Foundations, Non-Profits, Schools

Member of the OECD 2030 Scientific Committee

Advisor to the Alliance for the Future of Digital Learning, sponsored by the Mohammed bin Rashid Global Initiative (MBRGI).

Member, IEEE X-Reality Working Group

- Invited Speaker, Corporation for Public Broadcasting Board of Directors
- Advisory Board, Massachusetts Personalized Learning Edtech (MAPLE)
- Faculty Expert, Aspen Institute workshop on educational technology for Congressional staff
- Advisor, Hewlett Packard Catalyst Projects
- Invited Expert, Gates Foundation Workshop on Student Engagement and Non-Cognitive Skills Development
- Advisory Board, Miami Science Museum NSF-funded projects
- Research Advisor, Synergy ATE Project, University of Massachusetts-Boston

Invited Talk, Gates Foundation

Advisor, Hewlett Foundation

- Research Advisor, ADA and UNED, Costa Rica
- Research Advisor, the Friday Institute for Educational Innovation, North Carolina State University
- Advisory Board, George Lucas Education Foundation
- Juror, Brock International Prize in Education
- Member, National Science Teachers Association e-Learning Panel
- Board of Directors, Tech Boston Academy, Boston Public Schools
- Co-Chair, National Technology Advisory Board, Milwaukee Public Schools
- Education Advisory Board, the Partnership for 21st Century Skills
- Advisor, Concord Consortium NSF-funded "Modeling Across the Curriculum" project
- Advisor, North Carolina State University NSF-funded "Highly Interactive Fun Internet Virtual Environments in Science" project
- Advisor, New Mexico State University ATE Project
- Participant, Workshop on Emerging Educational Technologies, National Science Teachers Association
- Advisory Board, PBS TeacherLine
- Member, Association for Teacher Education Commission on Technology and the Future of Teacher Education

- External Examiner for the University of Hong Kong's Program in Information Technology in Education
- Policy Workshop Presenter, the Benton Foundation
- Lead, State Policy Development Workshops, Council of Chief State School Officers
- Member, International Education Association Steering Committee for the Second Information Technology in Education Study
- Advisory Board, MSP-Net Project, TERC
- Advisory Board, Optimizing Online Professional Development, EDC
- Advisory Board, Technology-Education Connections (TEC) Series, Teachers College Press

### **Funded Research**

#### Current Grants

- Grotzer, T. (PI), and Dede, C. (Co-PI). *Next Level Lab: Applied Learning Sciences for Access, Innovation and Mastery (AIM).* An initiative to enhance and extend workforce development, supported for the first year by Accenture for \$378,000.
- City, E. (PI), and Dede, C., Gabrieli, J., Blatt, J., and Kim, J. (Co-PIs). *Reach Every Reader*. A five year initiative between Harvard and MIT to improve early childhood literacy. This five year project, begun in January, 2018, is supported by the Chan-Zuckerberg Initiative for \$30M.
- Dede, C. (PI), and Kamarainen, A. (Co-PI). *Girl ARTS: Augmented Reality Targeting Science*. The ARTS project is aimed at the underrepresented population of girls in rural Maine and uses augmented reality to increase interest in and knowledge of STEM. This 3 year project was funded as a collaborating proposal with the University of Maryland in January 2018 for \$182,344.

#### Prior Funded Grants and Contracts as PI or Co-PI

- *National Science Foundation*: to explore the power of immersive virtual environments to support computational thinking and ecosystem science learning in elementary grades.
- *National Science Foundation*: building on a curriculum that fosters observational inquiry in virtual ecosystems, to add experiment-based inquiry as practiced in the ecosystems science field, through iterative cycles of experimentation, reflection, and revision.
- *Harvard Initiative on Teaching and Learning:* to study how decision-making is taught across academic disciplines using experiential learning and personalized practice (2 grants in sequence)

- *National Science Foundation:* to study how various forms of face-to-face and online professional development for the revised Advanced Placement Curricula correlate with student outcomes
- *Harvard Initiative on Teaching and Learning:* to transform team-learning teaching cases in public health for online platforms (2 grants in sequence)
- Harvard Initiative on Teaching and Learning: to use virtual reality narratives in foreign language pedagogy
- *Harvard Initiative on Teaching and Learning:* to study the use of virtual machines to track creative writing assignments
- *National Science Foundation:* to develop and study a set of learning experiences using mobile broadband devices (MBDs) to access virtual information and simulated experiences while immersed in real world ecosystems
- *National Science Foundation. To* study the extent to which relationships between learners can be improved through transformed social interactions an approach in which participants are endowed with capabilities for navigating their social world that humans do not normally possess.
- *National Science Foundation.* Across a developmental span, to study the relationship between specific technology-based motivational activities (including a multi-user virtual environment) and student interest in STEM careers.
- *Institute of Education Sciences, U.S. Department of Education and Gates Foundation*: to develop and study virtual performance assessments based on National Science Education Standards in middle school science.
- *Institute of Education Sciences, U.S. Department of Education*: to develop a Multi-User Virtual Environment (MUVE)-based ecosystems science curriculum to determine how this may aid students in learning sophisticated science content and complex processes of causality.
- *Qualcomm:* to study whether students using the EcoMUVE curriculum make further, complementary gains in motivation and learning by also using powerful mobile wireless devices to explore real ecosystems augmented with digital information and experiences
- *US Dept of Education:* to develop and study augmented realities that help middle school students learn math and literacy by infusing virtual experiences into real world settings.
- *NSF:* how to evolve a technology-based intervention for scalability even into contexts in which some of its conditions for success are attenuated or lacking.

- *NSF:* to study the types of insights gained by applying data mining and visualization approaches to three types of event-log datasets: intelligent tutoring system, multi-user virtual environments, and games
- *NSF:* to conduct an invitational research conference, develop a research agenda, and publish a book on the evolution of models for online teacher professional development.
- Harvard: to study sociosemantic networks for academic social tagging
- Harvard: to study the use of handheld devices in college teaching
- *NSF:* to examine the feasibility of developing a quantitative index that measures the relative scalability of an innovation.
- *Joyce Foundation:* to study the extent to which guidance and mentoring of Milwaukee Public School (MPS) leaders, by experts at Harvard and EDC using Internet-2 based interactive media across distance, can complement site visits and face-to-face interaction.
- *NSF (2 grants):* to study how shared virtual environments with digitized museum artifacts can aid the science learning of middle school students and can cast insights on situated learning and knowledge transfer
- *Atlantic Philanthropies:* to implement and study virtual communities of practice in Harvard's Teacher Education Programs
- *Markle Foundation:* to develop a business case study of Leapfrog, Inc., a company developing handheld learning devices
- *NSF:* to study the potential of virtual reality for learning complex conceptual material in science
- U. S. Department of Education: to develop immersive educational environments that aid learning-disabled secondary students to master science concepts and skills
- *Joyce Foundation:* to aid the Milwaukee and Cleveland Public Schools with their technology planning, integration, and evaluation.
- *Office of Naval Research:* to investigate the potential of virtual environment training for peacekeeping skills
- *NSF:* to educate engineers about designing complex systems
- *NSF:* to fund a series of interrelated presentations at the 1998 National Educational Computing Conference

*NSF:* to assess the potential of virtual reality for science education

Bell Atlantic Foundation: developing a regional consortium on distance education

- *NASA:* to study the impact of advanced information technologies on knowledge creation, capture, transfer, and utilization.
- *NASA/Air Force:* to design a tool for imaging mental models in virtual cognitive space.
- Apple Education Foundation: to study microcomputers as a means for increasing the communications skills of disabled children.
- *Hogg Foundation:* to assess the impact of home computers on family interaction patterns.

### **Research Presentations**

Featured Speaker, Florida Educational Technology Conference 05 Keynote, PBS/USDoEd Conference on Kids and Digital Media, 05 Keynote, 1<sup>st</sup> Southeastern Regional Conference on Instructional Design and Technology Plenary Panel, Consortium on School Networking National Conference, 05 Featured Speaker, National Science Teachers Association National Conference 05 Keynote, Tech Forum Regional Conference Midwest, 05 Three presentations, American Educational Research Association National Conference 05 Keynote, Manitoba Association for Distributed Learning and Training Conference, 05 Invited Address, Designing Learning Environments in the Digital Age, Harvard Design School Keynote, Innovations in Online Learning Conference, 05 Invited Address, Council of Fellows, American Council on Education Keynote, emPower Conference, University of North Texas Invited Speaker, Celt National Education Summit 05 Keynote, Keystone Conference on Videoconferencing Keynote, National Academy of Science Workshop on Information and Communications Technology Fluency Luncheon Speaker, National School Boards Association 2005 National Conference on Technology and Learning Keynote, NJEDge.net 2005 Conference Panel, AACTE National Conference 06 Keynote, Ohio Statewide Educational Technology Conference 06 Keynote, SUNY Learning Network Summit, 06 Invited Panel, Society for Information Technology in Teacher Education National Conference 06 Keynote, Illinois Statewide Educational Technology Conference 06 Keynote Panel, two Featured Speeches, and Workshop for Superintendents, Florida Educational Technology Conference 06 Keynote, IEEE Virtual Reality Conference 06 American Educational Research Association 06: 3 papers

Keynote, Indiana Higher Education Telecommunications System Conference 06

- Keynote, Massachusetts Enhancing Education through Technology Conference 06
- Panel, American Association of Museums 06

Invited Speaker, Louisiana State University Conference on Technology in Higher Education 06 Invited Speaker (2 talks), U.S. Department of Education Project Directors Meeting 06

Invited Speaker (2 talks), U.S. Department of Education Project Directors Meeting 06

Keynote, Rensselaer Polytechnic Institute Colloquium on Teaching and Learning 06

Keynote, Texas CoSN Chief Technology Officers Conference 06

Keynote, Educause Summer Symposium for Higher Education Executives 06

Keynote, Consortium for School Networking Texas K-12 Chief Technology Officer Clinic 06

Keynote, Building Learning Communities Conference 06

Invited Speech, Harvard Institute for Educational Management 06

Keynote, Synergy Conference 06

- Keynote, Campus Technology Conference 06
- Invited Case Teaching, State Education Technology Directors Association Education Forum 06
- Invited Talk, 13<sup>th</sup> National Advanced Technology in Education Principal Investigators Meeting 06
- Invited Talk, University of Massachusetts Science Technology Education and Mathematics (STEM) Initiative 06
- Keynote, Third International Summit of Leadership in Education
- Plenary Address, SmartTech Global Education Technology Summit 06
- Helen DeVitt Jones Lecturer, Texas Tech University 06
- Invited Address, Council of Graduate Schools National Conference 06
- Keynote, Florida Educational Technology Conference 07
- Keynote, EDUCAUSE ELI Conference 07
- Keynote, University of Missouri Statewide Library Conference
- Keynote Panel, Symposium Panel, and Spotlight Talk, Consortium for School Networking Conference 07
- Keynote, Eighteenth International Conference on College Teaching and Learning
- Two symposium presentations, two paper presentations, a SIG keynote, and two discussant sessions at AERA 07
- Keynote, National University Telecommunications Network conference 07

Keynote, ISTE-ETLO-SREB Online Learning Institute 07

- Spotlight Session and two Presentations, NECC 07
- Plenary Symposium and two Papers, CSCL 07
- Keynote, Learning Strategies Conference 07
- Plenary Panel, Campus Technology 2007
- Keynote and workshop, 2007 Conference on Distance Teaching and Learning
- Keynote, Columbian Ministry of Education Conference on Online Teaching
- Keynote, Educational Simulations and Serious Games Symposium, Defense Intelligence Analysis Center
- Keynote, 2007 MODSIM World Conference
- Plenary Panel, U.S. Chamber of Commerce Institute for a Competitive WorkForce 2007 Summit Panelist, NSF Advanced Technologies in Education Principal Investigators Conference 2007 Invited Plenary, Educause 2007
- Panel, State Education Technology Directors Association Forum 2007
- Sarah Fine Institute Lectures, University of Pittsburgh, 2007

Keynote, League for Innovation in Community Colleges 2007 Keynote and workshop, International Conference on Educational Technology 2007, Singapore Invited Spotlight Speaker, TIES 2007 Two Spotlight Sessions, Florida Educational Technology Conference 08 Two Plenary Panels, Consortium for School Networking 08 Invited Address, Three Papers, and Two Discussant Roles at American Educational Research Association National Conference 08 Keynote, Middle Tennessee State University Instructional Technology Conference 08 Keynote, Synergy Thought Leaders Conference 08 Keynote, University of Massachusetts System Instructional Technology Conference 08 Three Spotlight Sessions and Two Panels, NECC 08 Keynote and two workshops, Synergy Full Conference 08 Two Spotlight Sessions, Innovative Learning Conference 08 Presentation, AECT 08 Panelist, State Educational Technology Directors Association 08 Two panels, National Conference on Technology Innovation 08 Two spotlight sessions, Florida Educational Technology Conference 09 Invited Colloquium, Lehigh University Keynote and Plenary Talk, NSF ITEST PIs Meeting 09 Panelist, Advanced Leadership Initiative, Harvard University Two invited speeches, Consortium for School Networking national conference 09 4 presentations, 2 session chair, 2 session discussant, American Educational Research Association 09 Presentation, Media in Transition Conference 09 Keynote, Northeastern University Faculty Technology Conference 09 Plenary Panel, Innovate-Educate New Mexico 09 Invited Panelist, US. Dept of Education Policy Briefing on Technology Invited Panelist, American Enterprise Institute Symposium on Philadelphia's School of the Future Keynote, ISTE/BECTA/Kennessit EDUsummIT Two Spotlight sessions, one research paper, National Educational Computing Conference 09 Presenter, Harvard Institute for Educational Management, 2009 Keynote, Campus Technology Conference, 2009 Invited Panelist, DoD Worldwide Military Education Symposium 09 Keynote, National Conference on Online Teacher Professional Development, Costa Rica Keynote, Education Week Technology Conference New Jersey Invited Talk, National Research Council Workshop on Games and Simulations in Science Education Keynote and invited talks, EDGE Conference 09, Memorial University of Newfoundland Keynote, BECTA research conference 2009, Bristol England Keynote, Ubiquitous Learning 09 Invited Address, Redefining Teacher Education for Digital Learners Summit Invited Panel, New England Association of Schools and Colleges Invited Panel, HigherEdTech Conference 10 Keynote, Loyola University Technology in Education Conference Two Spotlight Sessions, Florida Educational Technology Conference 10

Keynote, Scholastic Summit on 21st Century Skills Keynote, National Association of State School Boards Conference on 21st Century Skills Invited Panelist, National Association for Research in Science Teaching Conference 2010 Plenary Speech and Invited Symposium, Society for Information Technology in Teacher **Education Conference 2010** Keynote, Peterson Symposium 2010, International Baccalaureate Program Four presentations and four discussant sessions, AERA 2010 Invited Talk, Pittsburgh Science of Learning Center Keynote, Lenovo Thinktank 2010 Plenary Speech, Maine Big Ideas 1-1 Summit Keynote, Synergy Conference San Francisco Three presentations (one spotlight, one panel, one invited address) at ISTE 2010 Keynote at the EDC Online Learning Institute 2010 Visiting Scholar (Virtual), University of Phoenix Speaker, Leadership: An Evolving Vision Institute, Harvard Keynote, Emerging Technologies in Nursing Education Conference Invited Talk, Ecosystems Society of America Invited Talk, HGSE Institute for Educational Management Invited Talk, HGSE Leadership Institute for Academic Librarians Invited Talk, HGSE Future of Learning Institute Invited Talk, Research Symposium in Learning Technologies for Spanish and Latin-American Academics, Harvard University Keynote, New Hampshire Association of Special Education Administrators August Academy Plenary Panel, New England Board of Higher Education Conference 2010 Virtual Keynote, United Kingdom VITAL Initiative Keynote, SolutionTree 21st Century Learning Summit Plenary Panel, Ecosystems Education Summit Invited Address, Drexel University Co-Host and Keynote, 2010 Wireless EdTech Conference Invited Talk, North Carolina E-Learning Board Keynote, Great Lakes 1-1 Conference Panel Discussant, Association for Public Policy Analysis and Management Presenter, Invitational Workshop on Research in Diagnostic Assessment, North Carolina State University Spotlight Session and Invited Panel, Florida Educational Technology Conference 2011 Invited Talks, Conference on Cyberlearning Tools for STEM Education Two presentations, National Science Teachers Association 2011 Two presentations, Consortium for School Networking 2011 Invited Panelist, Public Sector Leaders Forum for Latin America 2011 Four papers and one panel, AERA 2011 Keynote, Association of Independent Maryland and DC Schools Keynote, Vermont Superintendents Conference 2011 Policy Briefing, Rennie and PACE Centers, Washington DC Keynote, 7th Annual Innovations in eLearning Conference, George Mason University Invited Speech, Roundtable Session, Model Lesson, and Two Panels, International Society for

Technology in Education National Conference 2011

Invited Address, Institute on Leadership—An Evolving Vision, Harvard Graduate School of Education Keynote, ERDI Innovation Conference 2011 Invited Address, Institute for Educational Management, Harvard Graduate School of Education Invited Address, Leadership Institute for Academic Librarians, Harvard Graduate School of Education Keynote, Leading Innovation Conference, North Carolina State University Invited Panelist, International Mobiles for Education for Development Symposium, USAID Panel Presentation, Society for Research on Effective Education Fall 2011 Keynote, International Society for Design and Development in Education Keynote, EC-TEL 2011 (Palermo, Italy) Invited Address, Workshop on Information and Communications Technology and Public Policy, Harvard's Kennedy School of Government Mary Blum Cohn Annual Lecture, University of New Hampshire Webinar on Models for Scale, Hewlett Packard Catalyst Grants Advisory Board Invited Talk, WestEd Board Invited Talk, Association for Educational Communications and Technology 2011 national conference Keynote, online 2011 Global Education conference Invited Speech, 2011 Learning and the Brain conference, Boston, MA Invited Speech, Brookings Institution, Washington DC Featured Speech and Panel, TIES 2011, Minneapolis MN Invited Panelist, Gates/MIT conference on Quality in Online Learning Keynote, Association of Teacher Educators Keynote, Educause Learning Initiative Kevnote 2012 EdTech Teacher Winter Conference A plenary panel, an invited panel, and two regular panels at the Consortium for School Networking 2012 Conference Keynote, 2012 Virtual Worlds Best Practices in Education conference (in Second Life) Keynote, Virginia Community College System New Horizons Conference 2012 American Educational Research Association Conference 2012 three papers, one poster, four discussant roles Keynote, Tech Forum Boston 12 Keynote, Johns Hopkins University Technology, Cognition, and Learning Summit 2012 Invited Talk, Invitational Research Symposium on Technology Enhanced Assessments, ETS Keynote, Learning First Leadership Council Invited Talk, Educational Testing Service Invited Plenary, NSF DRK-12 Principal Investigator Conference 2012 Keynote, Immersive Education Conference 2012 One paper, one panel, and one invited talk, International Society for Computers in Education Conference 2012 Keynote, EDC/SREB/ISTE Online Learning Institute 2012 Invited Talk, Leadership—An Evolving Vision Institute 2012 Invited Talk, Institute for Educational Management 2012 Invited Talk, Future of Learning Institute 2012 Invited Talk, Leadership Institute for Academic Librarians 2012

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Invited Talk, Defense Intelligence Agency Panel and Poster, USAID m-Education conference 2012 Faculty, Aspen Institute Conference on Educational Technology Invited Talk, George W. Bush Foundation Conference on School Productivity Keynote (via videoconference), European Learning Industry Group Invited Talk, Educause Learning Initiative Online Fall Focus Session 2012 Plenary Workshop, CoSN Teaming for Transformation Symposium, Mooresville, NC E. Bruce Street Lecture on mobile learning, University of North Texas Invited Speaker, NSF Math Science Partnerships PI Meeting 2013 Invited Speaker, SXSW 2013 Invited Talk on New Technology-based Models for Postsecondary Learning, NSF Chair of Symposium and two Discussant Roles, AERA 2013 Invited Speech, North Carolina Nature Research Museum Invited Speech, 2013 Learning Analytics Summer Institute - Boston Invited Talk, Institute for Educational Management 2013 Invited Talk, EDUCAUSE Workshop on Breakthrough Models 2013 Invited Talk, EDCAUSE Sprint on New Models for Postsecondary Learning 2013 Invited Talk, Leadership Institute for Academic Librarians 2013 Invited Plenary, Future of Learning Institute 2013 Working Group Leader, EDUsummIT Conference 2013 Invited Panelist, Educational Testing Service Symposium on Science Assessment Invited Panelist, Brookings Institution Mobile Learning Symposium Three plenary speeches and two panels, Wireless EdTech Conference 2013 Keynote, Ontario, Canada 21st Century Skills Symposium 2013 Keynote, Illinois Conference on Scaling Up Student Success Invited Speaker, Transatlantic Science Conference 2013 Keynote, Colleges of the Fenway Teaching/Learning Symposium 2013 Invited Panelist, City of Hong Kong Educational Transformation Conference Invited Speech, Columbia University Invited Speaker, 2014 Technology Enabled Personalized Learning Summit Keynote, 2014 LearnLaunch Conference Keynote, 2014 ACM Learning@Scale conference Two Panels, SXSW 2014 Two Panels, Consortium for School Networking 2014 Discussant, Pearson Digital Oceans report, National Press Club Five presentation and discussant roles, AERA 2014 Invited talk, Learning Environments for Tomorrow Institute, Harvard Invited talk, HarvardX Invited panelist, Global STEM Education conference 2014 Invited panelist, Smithsonian Digital Directions webinar Invited Talk, Grantmakers for Education Plenary Speaker, EdVis 2014 Keynote, Shanghai Open University Ubiquitous Learning Conference Speaker, IAP Research Symposium for Spanish and Latin American Academics Two poster sessions, International Conference on the Learning Sciences 2014 Invited Talk on Cyberlearning, National Science Foundation

Invited Panelist, Learning Analytics Summer Institute 2014 Speaker, Leadership—An Evolving Vision Institute, Harvard University 2014 Workshop presentation, EDUCAUSE Breakthrough Models Institute 2014 Speaker, Institute for Educational Management, Harvard University 2014 Keynote, SACSCOC Institute on Quality Enhancement and Accreditation 2014 Invited Speech and workshops, Kansas State University Keynote, Forum on Digital Media for STEM Learning Keynote, European Learning Industry Group (ELIG) 2014 Conference (London) Invited Talk, Science and Technology Center, University of Maryland Keynote and two workshops, 2014 Long Island Technology and Education Summit Keynote, 2014 Province of Ontario 21st Century Skills Round Table Keynote, European Conference on e-Learning (ECEL) 2014 (Copenhagen) Plenary Panelist Library IVIES + RTL 2014 conference Invited Webinar on Peer Learning, EDUCAUSE Invited talk, Boston Higher Education Innovation Council Keynote, Hong Kong Education City Conference 2014 Invited Talk, University of Hong Kong Center on Information Technology in Education Webinar, California Academy of Sciences Host and Presenter, Computing Research Association Workshop on Big Data in the Sciences and Engineering: Implications for Education Invited Session, Cyberlearning 2015 Invited Presenter, US DoEd STEM workshop Panel, CoSN 2015 Five presentations AERA 2015 Invited Webinar, Adobe Creativity Series Host and Presenter, Computing Research Association Workshop on Data-Intensive Research in Education Invited Panelist, Goldman Sachs/Harvard Global Education Conference 2015 Symposium, International Society for Technology in Education conference 2015 Speaker, Harvard University Institute on Leadership: An Evolving Vision 2015 Speaker, Harvard University Institute for Educational Management 2015 Keynote, New Hampshire Educational Technology Symposium 2015 Panelist, MIT Scaling STEM Education Summit 2015 Panelist and Workshop, European Learning Industry Group 2015 Conference (Berlin) Panelist, Corporation for Public Broadcasting Board Retreat 2015 Invited Presenter, 2015 OECD/EC Global Education Industry Summit (Helsinki) Keynote, Smart Education Conference, Beijing Normal University Keynote, Workshop, Fireside Chat at Ontario, Canada 21st Century Skills Summit Invited Talk, IBM Research Center Keynote, Teaching for Tomorrow Workshop, Rennie Center for Educational Research and Policy Spotlight Session, Talk, and Panel at CoSN 2016 Panel, Moderator, and Discussant at AERA 2016 Invited Talk, Personalized Learning Summit 2016 Presentation on Data-Intensive Research in Education, NSF DR K-12 PI Meeting 2016 Invited Panelist, OECD Summit on the Digital Economy (Cancun, Mexico)

Poster and Panel sessions at ISTE 2016

- Speaker at Harvard Graduate School Executive Education Institutes: Leadership—An Evolving Vision, Institute for Educational Management, Leadership Institute for Academic Librarians
- Organizing Committee and Panel Moderator, National Academy of Education Workshop on Big Data in Education
- Panel Presentation, IIT Leadership Conference 2016
- Presidential session and poster session, AECT 2016
- Keynote, SPARK conference 2016
- Invited Address, Concordia College, Portland, Oregon
- Keynote, ACT Summit 2016
- Presentation, NYSCATE 2016
- Keynote and paper presentation, Virtual Reality in Education: International Workshop at Harvard
- Presentation and Poster, Future Education Technology Conference (FETC) 2017
- Keynote and Featured Session, Ontario, Canada 21st Century Skills Summit
- Harvard Graduate School of Education Scaling for Impact Institute 2017
- Keynote, Virtual Worlds Best Practices in Education 2017 (in Second Life)
- Keynote, New Hampshire STEM Summit
- AERA 2017 one panel, one chair, one discussant
- Invited talk on science education, Harvard Astrophysics Center
- Panel, Global STEM Summit 2017
- Keynote, Rensselaer Polytechnic Conference on Learning Analytics
- Invited Talk, ARL-IIS Workshop on Team Learning and Taskwork 2017
- Spotlight Session, International Society for Technology in Education Conference 2017
- Four presentations, Distance Teaching and Learning Conference 2017
- Invited Speaker, Corporation for Public Broadcasting Board of Directors
- Invited Talk, Learning and the Brain Conference 2017
- Speaker and Facilitator, Scaling for Impact Institute, Harvard Graduate School of Education
- Keynote, SFERE-Provence 2018 Symposium, Marseille, France
- Invited Talk, Data in Education SIG, AERA
- Invited talk, Harvard Advanced Leadership Initiative Fellows 2018
- Invited Panelist, 2018 Global STEM Summit
- Co-Organizer and Presenter, Harvard's Invitational Workshop on the 60 Year Curriculum
- Keynote, Appalachian Higher Education Network Conference 2018
- Immersive Learning Faire, Leadership: An Evolving Vision, Harvard University
- Presenter, Institute of Education Management, Harvard University
- Invited Speaker, AI and Education Roundtable, Politico
- Presenter, ACTNext Education Technology and Computational Psychometrics Symposium University of Georgia Innovations in Teaching Conference
- University of Ottawa (Canada) Artificial Intelligence Symposium
- Invited Panel, iNACOL national conference
- Keynote, Harvard School of Public Health/Harvard Initiative in Learning and Teaching Case Teaching Workshop
- Invited Panelist, Harvard Advanced Leadership Initiative Fellows
- Invited Panelist, Interservice/ Industry Training, Simulation and Education Conference

Plenary Address, NSF-funded Workshop on Scalable Advanced Learning Ecosystems (Georgia Tech) Keynote, IEEE International Conference of Semantic Computing 2019 Invited Talk, Corporation for Public Broadcasting Advisory Council 2019 Panelist, SXSWEdu 2019 Invited Panel, Association of Test Publishers conference 2019 Workshop, Association for Continuing, Professional, & Online Education (UPCEA) conference 2019 Keynote, NSF-funded Workshop on Digitally Mediated Team Learning, University of Central Florida Speaker, National Governors Association Summit on Future Workforce Invited Panelist, Global STEM Summit at Harvard University Plenary Speaker, IEEE Learning Engineering Conference 2019 Invited Panelist, Future of Work Conference, UPCEA 2019 Speaker, ISTE 2019 Speaker, Serious Play Conference 2019 Keynote Speaker, International Youth Innovation Design Competition 2019 Poster session and Workshop, NSF STEM+C Principal Investigators Summit 2019 Panel, XR in Learning Global Summit 2019 Plenary Speech, Learning and the Brain Conference 2019 Invited Panel, I/ITSEC conference 2019 Keynote, IEEE AIVR conference 2019 Keynote, Illuminate conference 2020 Invited Panelist, Harvard Workshop on AI and Technology in Negotiation Panelist, Consortium for School Networking 2020 Plenary Speech, iLRN conference 2020 Invited Panelist, Republic of Letters conference 2020 Keynote, TechHR India 2020 Plenary Speech, iFEST 2020 Invited Speaker, NSF Future of Work workshop Keynote, IEEE AI4i 2020 Esperanza Webinar Rethink Higher Education September 2020 Two invited panels at ASU-GSV 2020 EdWeb webinar Panel, regional conference UPCEA NE 2020 Plenary Session, Google's The Great Exchange Student Engagement Summit 2020 Panel and Workshop, University of Houston-Clear Lake Panel, vI/ITSEC 2020 Lead Speaker, Webinar on e-Learning in Higher Education, sponsored by Faith Bangladesh Keynote, Open University of Hong Kong faculty development workshop Invited Panel, national conference UPCEA 21 Invited Talk, Future Workforce Conference February 2021 Invited Talk, Council for Adult and Experiential Learning (CAEL) webinar 2021 Invited Panelist, Bangladesh Daffodil University 2021 Invited Panelist, Institute for Educational Leadership webinar on diversity 2021 Invited Panelist, Central Asia NobelFest II

Invited Talk, Aprendocasa, Chile Invited Webinar, Arab Bureau of Education for the Gulf States Invited Panelist, Grantmakers for Education Moderator, ED Games Expo Fireside Chat Invited Panelist, LegalCon 2021 Co-Presenter, NIH SciEd conference 2021 Invited Panelist, High Tech High Touch (HTHT) Conference 2021 Invited Panelist, Conference Board Committee on Economic Development webinar Invited Panelist, eMOOCs and Learning@Scale 2021 Presentation, Connected Learning 2021 Invited Panel, American Marketing Association Presenter, IFEST 2021 Keynote, Thailand Cyber University International eLearning Conference 2021 Invited Panel, CIRCLS 2021 Invited Presentation, Minnesota Learning Commons Invited Panelist, Innovations in Undergraduate and Graduate Education 2021 Invited Workshop, Council of Former State School Officers Keynote, Singapore University of Social Sciences Invited Colloquium, Work and Life Center, Georgia Tech Invited Panelist, Global Tech in eLearning Forum 2022 Invited Talk, Educational Testing Service Keynote, 9<sup>th</sup> Educational Technology Summit (Turkey) Keynote, Distance Education and eLearning Summit (Malaysia) Keynote, International Conference hosted by Korean Society for Educational Technology Panel, 4th Kazakhstan EdTech Forum Corporation for Public Broadcasting-Public Broadcasting System Ready to Learn Advisory Board meeting WebXR Education Summit Panelist Plenary Speaker, IEEE ICICLE Learning Engineering Conference 2022 Speaker, iFEST 2022 Invited Panelist, Global Forum Latin America and the Caribbean 2022 Presenter, 9<sup>th</sup> International Conference on Concept Mapping Keynote, Immersive Education Summit (Switzerland) 2022 Keynote, AI and Education PALS UMass Workshop 2022 Keynote, Hope Collaborative Summit 2022 Keynote, Empowering Learners in AI 2022 Invited Panelist, Global Tech in eLearning Forum 2023 Workshop, Singapore University for Social Sciences Webinar, National Technological University, Singapore Presenter and Facilitator, HGSE Scaling for Impact Institute 2023 Accenture/HGSE Workshop on Generative AI and the Evolution of Work Keynote, University of Florida Workshop on Artificial Intelligence in Education Chair, Division C Symposium, AERA 2023 Canadian Association for University Continuing Education conference keynote 2023 Education University of Hong Kong Metaverse conference keynote 2023 AI x Education conference 2023 Plenary talk

IEEE ICICLE Learning Engineering conference 2023 workshop on motivation Keynote George Mason University IM-TECH conference 2023 Roundtable Panelist, New England Association of Schools and Colleges Webinar, Contact North 2023 Panel, Common Sense Media Panel, Empowering Learners in AI 2023 Panel, NSF SAIL conference 2023 Panelist, Webinar on AI in Higher Education, Tsinghua University Keynote, Gandaki University Nepal Panel, HGSE AI in Education 2024 Talk, Harvard XR 2024 Plenary Panel, Harvard China Education Symposium 2024 Keynote Northeastern University Keynote, UNC Greensboro Symposium on AI, AERA 2024 World Economic Forum, Education Global Learning Network panel 2024 Webinar for African Development Bank on Learning Portals for Adult Capacity Building Keynote, Learning Ideas Conference 2024 Keynote, Learning@Scale Conference 2024

#### **Professional Development Presentations**

Keynote, Academic Technology Conference, Lesley University Invited Address, Harvard Institute for Independent School Leaders, 05 Invited Address, Friday Institute, North Carolina State University Presenter, Harvard University International Educa tion Workshop 05 Presenter, Harvard University Institute for Educational Management 05 Invited Address, Microsoft U.S. Partners in Learning Mid-Tier Grantees Workshop 05 Keynote and Workshop, Teaching Academy, New Mexico State University Invited Panelist, Colorado Association of School Executives Invited Speech (videoconference), Iowa State Department of Education Invited Speaker, Deloitte and Harvard's Learning Innovations Laboratory Co-Sponsored Workshop on Millennials New Hampshire State Department of Education Technology Mini-Grants Conference 06 Invited Address, EDUCAUSE Web Symposium, May 06 Invited Talk, Wireless Generation, Inc. Invited Address, Massachusetts Association of School Business Officers Invited Address, Educause Web Symposium, November 06 Workshop, Association of Delaware Valley Independent Schools Invited Talk and Workshops, Indiana State University Invited Talk at Forum, Boston Museum of Science Invited Address and Workshops, St. Louis University Keynote, Conference on Children and Gaming, Southern New Hampshire University Invited Talks, Arizona State University Keynote, Leadership Conference, TetraData Corporation Invited "BrainGain" Address, Harvard Business School

Connecticut Cooperative Educational Services Distinguished Leadership Lecturer

Keynote, Coppin State 3<sup>rd</sup> Annual Conference on Information Technology in Teaching and Learning

- Workshop, National Institute for Staff and Organizational Development (NISOD)
- Keynote, 21st Century Learning Communities Conference, University of Louisville

Invited Presentation, U.S. State Department sponsored visit of representatives from Indonesia Ministry of Education

- Invited Talk, Association of American Publishers
- Workshop, NY BOCES Technology Leadership Institute 07

Invited Speech, Princeton University

Workshops, Springside School, Philadelphia

- Keynote, E-Learning for Educators 07
- Author's Lunch and Invited Talk, Massachusetts Association for Supervision and Curriculum Development
- Workshop, Association of Independent Schools of New England
- Keynote, Community College of Allegheny County Professional Development Day
- Keynote, Detroit Digital Learning Initiative Community Conference
- Workshop, Needham, MA Public Schools
- Keynote, aal Users Conference

Invited Talk, CLIR Symposium on Scholarly Methods in the Humanities, Brown University Keynote, Maine IL Public Schools

Invited Talk, Leadership Initiative in Science Education, Chemical Heritage Foundation Invited Talk, Bishops School, San Diego

Keynote, Instructional Technology Conference 08, Clark County NV Schools

Keynote, NY OCMBOCES Annual Conference 08

- Keynote, 6th Faculty of the Future Conference, Bucks County Community College
- Invited Presentation, University of Massachusetts-Amherst Marathon
- Speaker, Institute for Educational Management and Leadership: An Evolving Vision Summer Institutes at HGSE 08
- Panelist, Campus Technology Executive Leadership Institute 08
- Keynote, ABEL Conference, York University, Toronto
- Plenary Speaker, 1:1 Leadership Conference, North Carolina State University

Keynote, Manchester Community College

Presentation, Boston Public Schools Leadership Development Council

Workshops, University of Oklahoma

- Workshop, Montgomery County Intermediate Unit, PA
- Invited Talks, Framingham State University 08 and 09

Invited Talk, Kaput Center for Research and Innovation in Mathematics Education, UMass Dartmouth

Keynote, LITRE Conference, North Carolina State University

Keynote for Workshop on Mobile Devices in Research and Teaching, Harvard Libraries Workshop, Bethlehem PA Schools

Invited Talk, Derek Bok Center for Teaching and Learning, Harvard University

Invited Talk, North Carolina New Schools Project Leadership Conference 09

Invited Presentation, Chilean University Team, LASPAU

Workshop, Needham Public Schools

Invited Address, Harvard Provost's Technology Conference 09 Webinar, Classroom 2.0 Future of Education series Keynote, Nevada Association of School Administrators Turning Technologies Gaming Workshop, Orlando, Florida Keynote, Faculty Technology Conference, Austin Peay University Invited Videoconference to CESAs #1 and #6, Wisconsin Invited Webinar, Discovery Educational Network Invited Talk, Superintendents' Roundtable, Harvard Invited Talk, Leadership Institute for Superintendents, Harvard Invited Talk, Universidad Diego Portales, LASPAU-Harvard NSF ITEST Program Webinar and Panel on Scaling Up Invited Speech, Ubiquitous Learning Institute, University of Illinois Champaign-Urbana Invited Speech, Lexington Public Schools Invited Speech, University of Baltimore Invited Speech, Excelsior College Workshop, The Education TEC Cooperative Keynote, University of Alabama System Scholars Conference Keynote, New Hampshire Summit on Redefining Educator Development Workshop, Chappaqua Public Schools, New York Talk, Discovery Educational Network 2010 Invited Talk, Punahoe Independent School, Hawaii Plenary Panel, Sylvan Learning Conference 2010 Talk, Houghton Mifflin Workshop Workshop, Bethune-Cookman University Invited Speech, USNY Technology Policy and Practices Council Keynote, Verizon Foundation Principal Investigators Meeting Invited Talk, Gates Foundation Invited Talk, Shriver Center, University of Massachusetts Workshop, Northern Westchester BOCES Invited Talk, Center for Innovative Teaching and Learning, George Washington University Panelist, Many Voices One Goal Conference, Raleigh NC Invited Talk, Tufts University STEM Series Invited Webinar on Mobile Learning, USAID Workshop, Region 10 Educational Service Center, Dallas, Texas Panelist, Critical Issues and Strategies for Leaders of Modern Universities in Brazil, LASPAU Keynote, Faculty Technology Day, Suffolk University Webinar, U.S. Dept. of Education Office of Special Education Keynote, CITE Conference 2011, Chesterfield VA Public Schools Two Webinars on immersive learning for EdWeb Webinar, Intel External Research Partners Opening Address, Princeton NJ Regional Schools Invited Talk, EDCO Policy Forum Invited Talk, Raise Your Hand Texas 2012 Panelist, Harvard Business School 2012 Social Enterprise Conference Plenary Speech, Scholastic Conference on Cognitive Science, Technology, and Teaching Workshop, Special Education Directors, Wested

Keynote, Southern Alberta Institute of Technology Faculty Showcase Workshop, International Academic Program Research Symposium (Chile, Spain, Mexico) Invited Speaker, NAEP Governing Board Event on 2009 Science Outcomes Invited Speaker, Webinar, Connected Teaching Event 2012 Invited Talk (in Second Life), International Society for Technology in Education SIG-Virtual Environments Workshops and Talks, The Bishops School (La Jolla, California) Invited Talk, Howard Hughes Medical Institute Education Group, MIT Webinar on Scaling Up Success, CoSN-MacArthur Participatory Learning Initiative Invited Speaker, Cambridge, MA STEM Inclusion Roundtable Workshop, Southern Westchester BOCES Keynote, Faculty Development Workshop, University of New Haven Keynote, Lexia Learning conference on personalization Workshop, Massachusetts Association of School Business Officers Invited Talk (virtual), Cooperative Educational Service Center #1, Wisconsin Panel Moderator, Harvard Igniting Innovation Conference 2014 Invited Panelist, Harvard College in Asia Program Invited Panelist, Harvard Venture Partners Invited Talk, Summit Analytics Invited Panelist, Harvard Advanced Leadership Initiative Think Tank 2015 Keynote, US Naval War College Faculty Cloister 2015 Invited Briefing, Hewlett Foundation Board Retreat 2015 Invited Briefing, USNY Technology Policy and Practice Council Keynote, ECPI University Invited Talk, Friday Institute, North Carolina State University Invited Panelist, MIT China Innovation and Entrepreneurship Forum Invited Presenter, Committee on Children, Connecticut State Legislature Invited Presenter, Chappaqua Public Schools Panelist, Harvard Innovation Lab Symposium on VR and AR 2016 Workshops for Principals and Superintendents, Conseil des écoles catholiques du Centre-Est, Ottawa, Canada Workshop for Open Pediatrics, Boston Children's Hospital Panel, Harvard South Asia ConnectED conference Panel, Harvard Bangladesh Development Conference Workshops for K-12 Chinese students, US China Cultural Exchange Foundation Invited talk, Harvard GSE Innovations and Ventures in Education Keynote, Health Care Education 2.0, Harvard Macy Institute Keynote and workshops, Lamar University Workshops for Principals and teachers, Conseil des écoles catholiques du Centre-Est, Ottawa, Canada Invited talk, Harvard University Franklin Fellowship Program Invited Talk, University of North Carolina School of Education Invited Talk, North Carolina State University Friday Institute Invited Talk, Middlesex Community College, Lowell, Massachusetts Invited Panelist, Boston VR Meetup Judge, HIVE Pitch Competition 2018, Harvard Innovation Lab

Workshop, Eight Schools Association Invited Keynote, Needham Public Schools Workshops on Leadership, CECCE School Board, Ottawa, Canada Invited Talk, North Carolina State University Friday Institute Invited talk, Harvard University Franklin Fellowship Program Webinar, Greater Texas Foundation Invited Talk, UMass Lowell School of Engineering Panel, Harvard Advanced Leadership Initiative Final Symposium 2019 Talk and workshops, Rollins College Invited talk, Boston VR Meetup Invited Talk, Harvard Club of Bangalore Invited Panelist, ETHRWorld Future Skills Conference Invited Panelist, Boston Higher Education Meetup Workshop, Garden City School District, New York Invited Talk, HGSE China Education student group Two Invited Talks, HGSE TIE Diversity Inclusion Equity group Invited Speaker, DePaul University School of Continuing Education Plenary Speaker Future FocusED 2023, Beaver County Day School Harrisburg University workshop 2023 Purdue University 2023 Thayer Academy workshop on AI 2023, 2024 Southern Westchester BOCES on AI 2023 Real Colegio Complutense Harvard University Center for Astrophysics Harvard University China Europe International Business School STTAR (India) workshop on AI in Teaching and Learning

# Administrative Responsibilities

- From July, 2001 to June, 2004, Chair of Learning & Teaching Area, Harvard Graduate School of Education.
- From November 1996 to October, 1997, Senior Program Director, National Science Foundation
- From January, 1993 to September, 1995, Director of Federal Relations & Strategic Alliances, GMU.
- From January, 1991 to January, 1994, Director, Center for Interactive Educational Technology, GMU

Initiated and directed graduate programs in science education, futures research, and educational technology at the University of Houston—Clear Lake.

Awards2024: Quandary was selected from more than 1,900 submissions to receive a<br/>\$300,000 "Tools Award" in the "Preparing for the 21st Century World" track.2024: awarded the title of Scholar by the Immersive Learning Research Network<br/>2023: awarded the title of Fellow in the Online Learning Consortium

2023: Association for Educational Communications and Technology Annual Achievement Award: For Accomplishments Advancing the ECT Field.

2022: Association for Educational Communications and Technology Distinguished Development Award

2022: Association for Educational Communications and Technology Outstanding Digital Learning Artifact Award

2022: Outstanding Contribution to Workplace & Industry Training Award at the iLRN 2022 International Conference

2021: "Community Builder" award from the National Coalition for Technology in Education and Training (NCTET)

2017: Named as one of "the top 25 edtech innovations and innovators of the past 25 years" by the Consortium for School Networking

2017: Outstanding Contributions to Research in Immersive Learning Award, AERA

2016: Center for Digital Education Award in "Top 30 Technologists, Transformers, and Trailblazers"

2015 Best Paper Award, AERA SIG Applied Research in Immersive Environments for Learning

Noted by Tech and Learning journal in 2013 as one of the most "influential people affecting the advancement of technology in education"

2012 Award from Association of Teacher Educators for "outstanding leadership and dedication to the education profession."

2012 International Conference on Interpersonal Relationships in Education Best Poster Award

2012 National Environmental Education Week Green STEM Innovators Award

2011 Association for Educational Communications and Technology Distinguished Development Award

2011 Association for Educational Communications and Technology Immersive Learning Award, Interactive Category

Outstanding Paper Award, Ed-Media 2011 (authors Code, Clarke-Midura, Zap, & Dede)

2011 Fellow of the American Educational Research Association

Special Achievement Award, Society for Information Technology in Teacher Education, 2010

Certificate of Special Recognition, Consortium for School Networking, 2009

The Friday Medal, North Carolina State University, 2009

Honored by Harvard University as an Outstanding Teacher, 2007

National Service Award, National University Telecommunications Network, 2007 AERA Outstanding Reviewer, 2003, 2008

COSN "Making It Happen" Award, 2003

Chancellor's Award for Outstanding Service, UHCL, 1985

Educational Policy Fellow, Institute for Educational Leadership, 1979

University-wide Outstanding Teaching Award, UHCL, 1975

Danforth Fellow, 1969-72

Named as one of top twelve graduating chemists by the American Chemical Society, 1969

Courses Taught	T518 T-502 T511J	Next Generation Design: Methods and Heuristics Learning Media that Bridge Distance and Time Effectively Implementing Learning Technologies to Address Global and Local Challenges
	T511K	Transforming Education through Emerging Technologies
	T-561	Emerging Educational Technologies
	S-475	Practicum in Design-based Research
	T-505	Leadership in Educational Technology Policy
	T-545	Engagement and Learning: Technologies that Invite and Immerse
	T510T	Engagement and Learning: Technologies that Invite and Immerse (half course)
	517	Immersive Learning: Virtual, Augmented, and Mixed Realities
Service	2024-present 2021-present 2013-present	The Harvard Undergraduate Research Journal Review Board Journal of Technology, Mind, and Behavior Editorial Board MITx Press Editorial Board
(current)	2010-present	ETR&D Research Consulting Editor
	2009-present	Editorial Board, Educational Researcher
	2003-present	Technology Education Connections Advisory Board, Teachers College Press
	2001-present	Editorial Review Board, Journal of Technology in Teacher Education
	2001-present	Editorial Board, International Journal of Science Education
	2000-present	International Journal of Educational Technology Advisory Board
	2000-present	Journal of Science Education and Technology Advisory Board
	1998-present	Review Board, Journal of Learning Sciences

Memberships	American Educational Research Association
	Consortium for School Networking
	International Society of Learning Sciences

### Publications

#### Edited Volumes

- Dede, C. & Richards, J. (Eds.). (2020). <u>The 60-Year Curriculum: New Models for Lifelong</u> <u>Learning in the Global Digital Economy</u>. New York, NY: Routledge.
- Dede, C., Richards, J., & Saxberg, B. (Eds.). (2019). <u>Learning engineering for online education:</u> <u>Theoretical contexts and design-based examples</u>. New York: Routledge.
- Liu, D., Dede, C., Huang, R., & Richards, J. (Eds.). (2017). <u>Virtual reality, augmented reality,</u> and mixed reality in education. Hong Kong: Springer.
- Dede, C., Eisenkraft, A., Frumin, K., & Hartley, A. (Eds). (2016). <u>Teacher learning in the digital</u> <u>age: Online professional development in STEM education</u>. Cambridge, MA: Harvard Education Press. (also published in Chinese by the Science Press, 2018)
- Dede, C., & Richards, J. (Eds.). (2012). <u>Digital teaching platforms: Customizing classroom</u> <u>learning for each student</u>. New York: Teacher's College Press.
- Dede, C., (Ed). (2006). <u>Online Professional Development for Teachers: Emerging Models and</u> <u>Methods</u>. Cambridge, MA, Harvard Education Press.
- Dede, C., Honan, J., & Peters, L., (Eds). (2005). <u>Scaling Up Success: Lessons Learned from</u> Technology-Based Educational Improvement. New York: Jossey-Bass.
- Dede, C., Ed. (1998). <u>Learning with Technology</u> (1998 ASCD Yearbook). Alexandria, VA: Association for Supervision and Curriculum Development.

#### Articles and Book Chapters

- Chen, J., Wang, M., Grotzer, T. A., & Dede, C. (2024). Analysing students' concept mapping style and its association with task performance in computer-based inquiry learning. *Journal of Computer Assisted Learning*, 40(4), 1727-1744. <u>https://doi.org/10.1111/jcal.12984</u>
- Goel, A., Dede, C., Garn, M., & Ou, C. (2024). AI-ALOE: AI for reskilling, upskilling, and workforce development. *AI Magazine* 45: 77–82. <u>https://doi.org/10.1002/aaai.12157</u>
- Bondie, R., Mancenido, Z., Adams, H., Dede, C. (2024). Exploring Data Visualization in Mixed Reality Simulations to Measure Teacher Responsiveness. In: Bourguet, ML., Krüger, J.M., Pedrosa, D., Dengel, A., Peña-Rios, A., Richter, J. (eds) *Immersive Learning Research Network. iLRN 2023*, pp. 173-181. Communications in Computer and Information Science, vol 1904. Springer, Cham.
- Shane, M., & Bressler, M., D., & Reilly, J., & McGivney, E., & Grotzer, A., T., & Dede, C. (2023). Toward a framework for robust design-based research. *Educational Innovations and Emerging Technologies*, 3(3), 1-7. <u>https://doi.org/10.35745/eiet2023v03.03.0001</u>
- Bondie, R., & Dede, C. (2023). What we want versus what we have: Transforming teacher performance analytics to personalize professional development. In P.D. Moskal, C.D. Dziuban, & A Picciano (Eds.), *Data Analytics and Adaptive Learning, Research Perspectives,* pp. 23-37. New York, NY: Taylor & Francis/Routledge.

- Dede, C., & Lidwell, W. (2023). Developing a next-generation model for massive digital learning. *Education Sciences* 13, no. 8: 845. <u>https://doi.org/10.3390/educsci13080845</u>
- Bondie, R., Zushko, A., Wiseman, E. Dede, C., & Rich, D. (2023). Can differentiated and personalized mixed reality simulations transform teacher learning? *Technology Mind Behavior* doi.org/10.1037/tmb0000098
- Metcalf, S., Dede, C., Jeon, S., & Reilly, J.M. (2022). Fostering Systemic and Evidentiary thinking in Elementary learners: Concept Mapping of Causal Relationships in Ecosystems. In A. Canas, P. Reiska, & J. Vanhear (Eds.), *Concept mapping: Improving learning and understanding* (Proceedings of the 9th International Conference on Concept Mapping), 106-115. Tallin, Estonia: Concept Mapping Academy.
- Dieterle, E, Dede, D., & Walker, M. (2022). The cyclical ethical effects of using artificial intelligence in education. *AI & Society* DOI: <u>10.1007/s00146-022-01497-w</u>
- Leech, K.A., Wheat, D., Rowe, M., Blatt J., & Dede, C. (2022). "Literacy is everywhere!": Using digital technology to broaden how parents view the home literacy environment *Applied Developmental Science*, DOI: <u>10.1080/10888691.2022.2125392</u>
- Dede, C. (2022). The Coming Sea-Change in Teacher Education. Journal of Technology and Teacher Education, 30(2), 117-125. Waynesville, NC USA: Society for Information Technology & Teacher Education. https://www.learntechlib.org/primary/p/221170/.
- Radu, I., Dede, C., Wang, J., Nie, G., Bhola, K., & Scuzzarella, M. (2022). Using virtual environments to reveal teacher bias towards students' socioeconomic status. 2022 8th International Conference of the Immersive Learning Research Network (iLRN), pp. 1-8. doi: 10.23919/iLRN55037.2022.9815955
- Dede, C., Zhao, Y., Mishra, P., and Bonk. C. (2021). The Silver Lining for Learning webcasts as a bottom-up driver of global educational innovation. *Journal of Digital Politics* 1(3), 523-542. doi: 10.53227/103803
- Chen, J., Chen, M., Dede, C., & Grotzer, T. (2021). Analyzing student thinking reflected in selfconstructed concept maps and its influence on inquiry task performance. *Instructional Science*, 49, 287-312.
- Dieterle, E., Holland, B., & Dede, C. (2021). The cyclical effects of ethical decisions involving big data and digital learning platforms. In E.B. Mandinach & E.S. Gummer (Eds.), *The ethical* use of data in education: Promoting responsible policies and practices, pp. 198-215. New York, NY: Teachers College Press.
- Dede, C., & McGivney, E. (2021). Lifelong learning for careers that don't yet exist. In S. Jagannathan (Ed.), *Educational Technologies for Sustainable Development: How Upskilling*, *Data Analysis, and Digital Innovations Foster Lifelong Learning*, pp. 36-44. New York: Taylor & Francis.
- Dede, C. (2021). Supporting unlearning to enable upskilling. In J. Wingard & C. Farrugia, *The Great Skills Gap: Optimizing Talent for the Future of Work*, pp. 79-84. Menlo Park, CA: Stanford University Press.
- Radu, I., Dede, C., Seyam, M. R., Feng, T., & Chung, M. (2021). Using 360-Video virtual reality to influence caregiver emotions and behaviors for childhood literacy. *International Journal of Gaming and Computer-Mediated Simulations (IJGCMS)*, 13(1), 12-33. doi: <u>10.4018/IJGCMS.20210101.oa2</u>
- Bondie, R., & Dede, C. (2021). Redefining and Transforming Field Experiences in Teacher Preparation through Personalized Mixed-Reality Simulations. In R.E. Ferdig & K.E. Pytash (Eds.), What teacher educators should have learned from 2020, pp. 229-242. Association for

the Advancement of Computing in Education (AACE). <u>https://www.learntechlib.org/p/219088/</u>.

- Bondie, R., Macenido, Z, & Dede, C. (2021). Interaction principles for digital puppeteering to promote teacher learning. *Journal of Research in Teacher Education*, *53*(1), 107-123. DOI: 10.1080/15391523.2020.1823284
- Dinnar, S., Dede, C., Johnson, E., Straub, C., & Korjus, K. (2021). Artificial intelligence and technology in teaching negotiation. *Negotiation Journal*, 37(1), 65-82. <u>https://doi.org/10.1111/nejo.12351</u>
- Metcalf, S.J., Reilly, J.M., Jeon, S., Wang, A., Pyers, A., Brennan, K. & Dede, C. (2021). Assessing computational thinking through the lenses of functionality and computational fluency, *Computer Science Education* 31(2), 199-223, DOI: <u>10.1080/08993408.2020.1866932</u>
- Mills N., Courtney M., Dede C., Dressen A., & Gant R. (2020). Culture and vision in virtual reality narratives. *Foreign Language Annals* 53(4), 733-760. https://doi.org/10.1111/flan.12494
- Jeon, S., Metcalf, S., Dickes, A. & Dede, C. (2020). Elementary teacher perspectives on a blended computational modeling and ecosystem science curriculum. In D. Schmidt-Crawford (Ed.), Proceedings of Society for Information Technology & Teacher Education International Conference 2020 (pp. 46-55). Waynesville, NC USA: Association for the Advancement of Computing in Education (AACE).
- Richards, J., & Dede, C. (2020). The 60 year curriculum: A strategic response to a crisis. *EDUCAUSE Review 55(4)*, 24-38.
- Dede, C. (2020). Necessity is the parent of transformation: Universal, blended, personalized, lifelong learning. *School Administrator* 77(7), 26-29.
- Fischer, C., Fishman, B., Levy, A., Eisenkraft, A., Dede, C., Lawrenz, F., Jia, Y., Kook, J., Frumin, K., & McCoy, A. (2020). When do students in low-SES schools perform better-than-expected on a high-stakes test? Analyzing school, teacher, teaching, and professional development characteristics. *Urban Education*, 55(8-9), 1280-1314. https://doi.org/10.1177/0042085916668953
- Fischer, C., Foster, B., McCoy, A., Lawrenz, F., Dede, C., Eisenkraft, A., Fishman, B., Frumin, K., & Levy, A. (in press). Identifying levers related to student performance on high-stakes science exams: Examining school, teaching, teacher, and professional development characteristics. *Teachers College Record*, 122(2).
- Gibson, E.B., Kipp, M., Dede, C., Gooding, H.C., Phelps-Coco, A., Lin, K., Levinson, J.A., & Austin, S.B. (2020). Delivering case method teaching through online platforms: Adapting active learning techniques and maximizing learner engagement. *Educational Designer 4(13)*
- Dede, C. (2020). Reconceptualizing higher education and lifelong learning in the era of the synergistic digital economy. In C. Dede & J. Richards (Eds.), *The 60-Year Curriculum: New Models for Lifelong Learning in the Digital Economy*, pp. 1-24. New York, NY: Routledge.
- Reilly, J.M., McGivney, E., Dede, C., & Grotzer, T. (2020). Assessing science identity exploration in immersive virtual environments: A mixed methods approach, *The Journal of Experimental Education*, DOI: 10.1080/00220973.2020.1712313
- McCoy, A., Levy, A., Frumin, K., Lawrenz, F, Dede, C., Eisenkraft, A., Fischer, C., Fishman, B., & Foster, B. (2020). From the inside out: Teacher responses to the AP curriculum redesign. *Journal of Science Teacher Education*, 31(2), 208-225. https://doi.org/10.1080/1046560X.2019.1685630
- Wolbrink, T., von Schaik, S.M., (30 other authors), Dede, C., & Burns, J. P. (2019). Online learning and residents' acquisition of mechanical ventilation knowledge: Sequencing matters. *Critical Care Medicine* DOI: 10.1097/CCM.000000000004071

- Reilly, J. & Dede, C. (2019). Stealth Assessment via Deep Learning in an Open-Ended Virtual Environment. In *Proceedings of the 12th International Conference on Educational Data Mining*, 643 – 646.
- Reilly, J. & Dede, C. (2019). Augmented Reality in Education. In A. Zhang & D. Cristol (Eds.), *Handbook of Mobile Teaching and Learning* (pp. 1337 – 1351). Singapore: Springer.
- Reilly, J. & Dede, C. (2019). Differences in Student Trajectories via Filtered Time Series Analysis in an Immersive Virtual World. In *Proceedings of the 9th International Conference* on Learning Analytics & Knowledge (pp. 130 – 134). New York, NY: ACM.
- Dede, C., Grotzer, T., Kamarainen, A., & Metcalf, S. (2019). Designing immersive authentic simulations that enhance motivation and learning: EcoLearn. In R. Feldman (Ed.), *Learning science: Theory, research, practice*, pp. 229-259. New York: McGraw Hill.
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## Dissertation

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